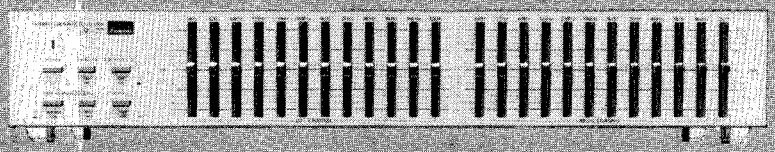
SERVICE MANUAL

STEREO GRAPHIC EQUALIZER

SANSUI SE-77

(Silver & Black Model)



CAUTION

1. Use only replacement parts recommended by the manufacturer.
2. Measure insulation resistance before returning the appliance to the customer to prevent electrical shock.

Sansui

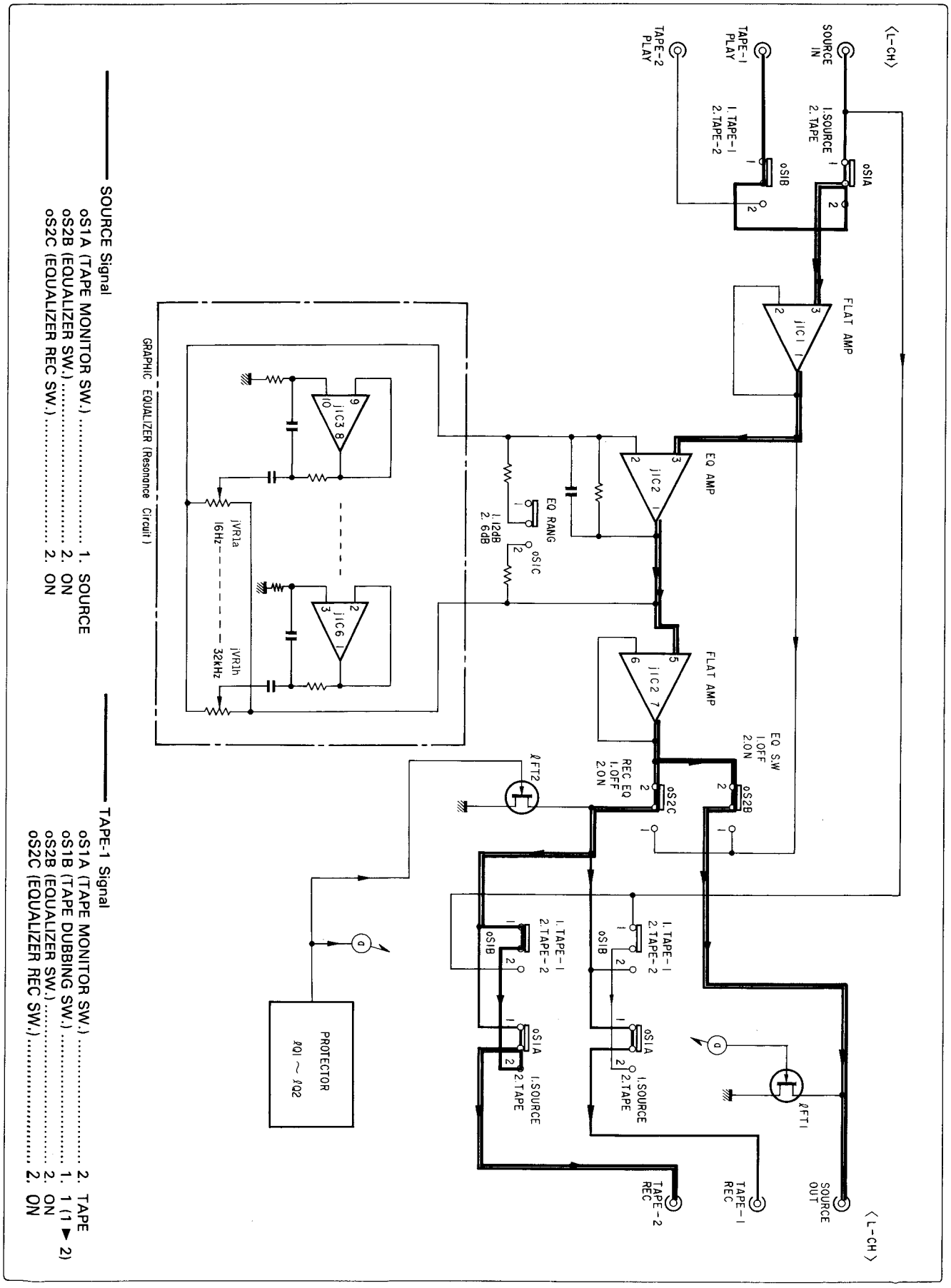
SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Input sensitivity and impedance (1 kHz)
SOURCE IN, TAPE PLAY-1,2 ..... 1V/30 kilohms
Output level and impedance (1 kHz)
TAPE REC-1,2 ..... 1V/4.7 kilohms
SOURCE OUT ..... 1V/4.7 kilohms
(Maximum output level: 5V/4.7 kilohms at 0.5% total harmonic distortion)
Total harmonic distortion (1V, 20 Hz to 20 kHz)
SOURCE IN, TAPE PLAY-1,2 ..... 0.005%
Frequency response
(at rated output, Equalizer controls: "0" position)
SOURCE IN, TAPE PLAY-1,2 ..... 10 Hz to 100 kHz, +1.0 dB, −1.0 dB
Signal to noise ratio (Short-circuit, A-network)
SOURCE IN, TAPE PLAY-1,2 ..... 110 dB
Equalizer frequency ..... 16 Hz, 32 Hz, 64 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, 32 kHz
Level variation range ..... ±12 dB, ±6 dB
Others
Power voltage ..... 120, 220, 240 V (50/60 Hz)
For U.S.A. and Canada ..... 120 V (60 Hz)
Power consumption ..... 7 watts
Dimensions ..... 430 mm (16-15/16") (W)
76 mm (2-15/16")(H)
253 mm (10") (D)
Weight ..... 2.7 kg (6.0 lbs) net
3.5 kg (7.7 lbs) packed

* **Design and specifications subject to change without notice for improvements.**

1. BLOCK DIAGRAM

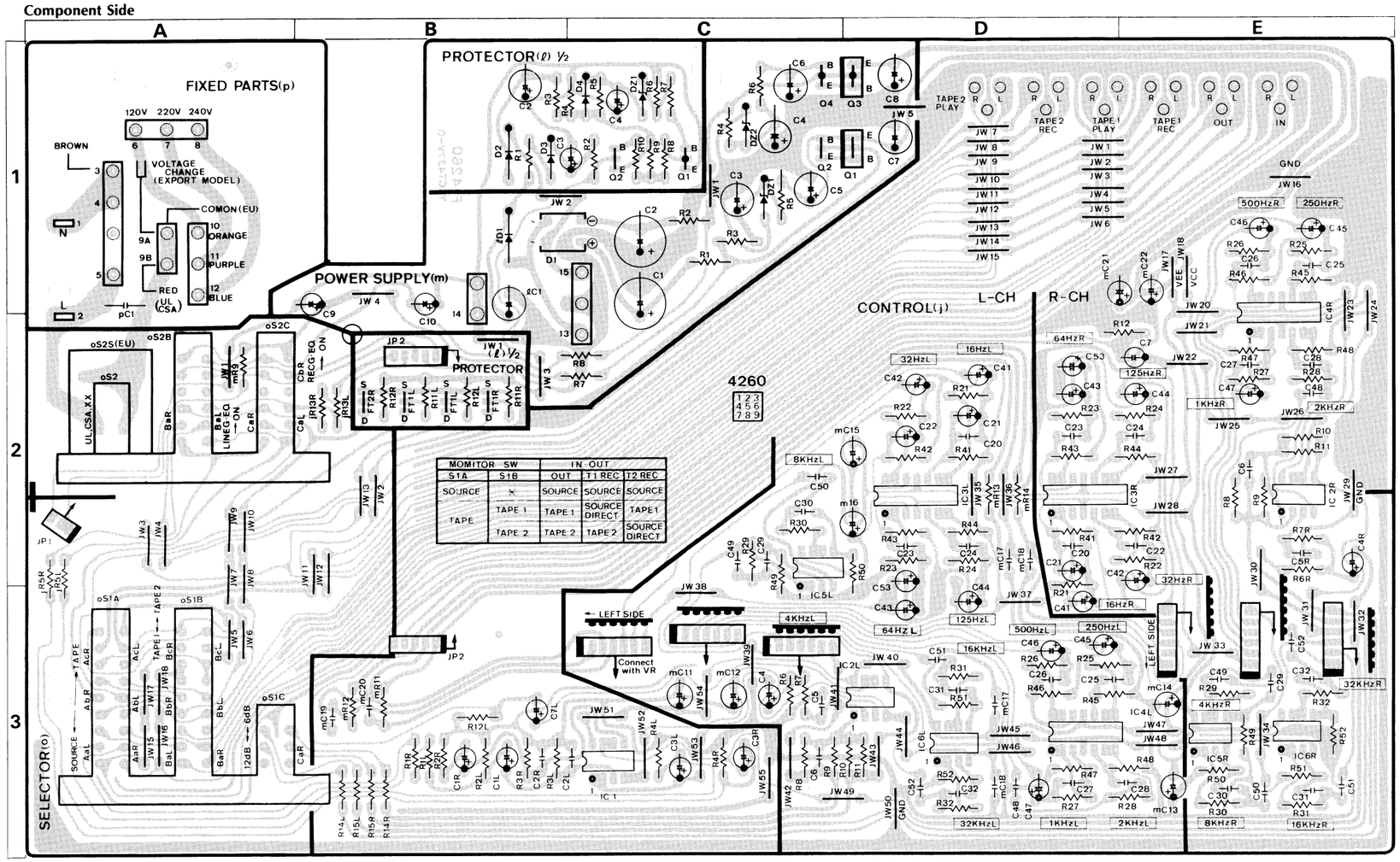


2. PARTS LOCATION & PARTS LIST

2-1. F-4260 Main Circuit Board (Stock No. 00756401)

•Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

Component Side



Parts List

Parts No.	Stock No.	Description
•IC		
jIC1	07208900	NJM4558DX
	or 46673800	M5218P (RIAA)
jIC2	07208900	NJM14558DX
	or 46673800	M5218P (RIAA)
jIC3	46500800	NJM2058D
jIC4	46500800	NJM2058D
jIC5	07208900	NJM4558DX
	or 46673800	M5218P (RIAA)
jIC6	03613800	NJM4559D-D
	or 46580100	M5218P
•Transistor		
IQ1	46188601	2SA1015
	or 46367201	2SA1048
IQ2	46188701	2SC1815
	or 46367301	2SC2458

Parts No.	Stock No.	Description
•FET		
IFT1	03703000	2SK117-O
	or 03703001	2SK117-Y
	or 03703400	2SK163-K1
	or 03703401	2SK163-K2
	or 03703402	2SK163-L1
	or 03703403	2SK163-L2
	or 46421100	2SK246-Y
	or 46421101	2SK246-GR
IFT2	03703000	2SK117-O
	or 03703001	2SK117-Y
	or 03703400	2SK163-K1
	or 03703401	2SK163-K2
	or 03703402	2SK163-L1
	or 03703403	2SK163-L2
	or 46421100	2SK246-Y
	or 46421101	2SK246-GR

Parts No.	Stock No.	Description
•Diode		
ID1	03117700	10E-2
ID2	03117700	10E-2
ID3	03117600	1S2473
ID4	03117600	1S2473
•Zener Diode		
IDZ1	46111800	05Z 6.2-Y
•Transistor		
mQ1	03083901	2SD 313AL
mQ2	46188701	2SC1815
	or 46367301	2SC2458
mQ3	03032301	2SB507V11AL
mQ4	46188601	2SA1015
	or 46367201	2SA1048

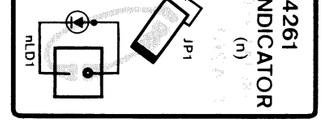
Parts List <F-4260>

Parts No.	Stock No.	Description
•Diode		
mD1	46273600	DBB10-B
•Zener Diode		
mDZ1	03179200	RD15E-B
	or 46114600	05Z15-Z
mDZ2	03179200	RD15E-B
	or 46114600	05Z15-Z
oS1	46667600	Push SW, TAPE MONITOR•RANGE
oS2	46667800	Push SW, POWER•EQUALIZER•EQUALIZER REC
pC1	46425800	0.01μF 400V C.C.
oZ1	46363900	6P Terminal Board, SOURCE•TAPE-1•(REC)
oZ2	46363900	6P Terminal Board, TAPE-1 (PLAY)•TAPE-2 (REC/PLAY)

•Note: The circuit board, F-4261 is not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

2-2. F-4261 Power Indicator Circuit Board

Component Side



Parts List

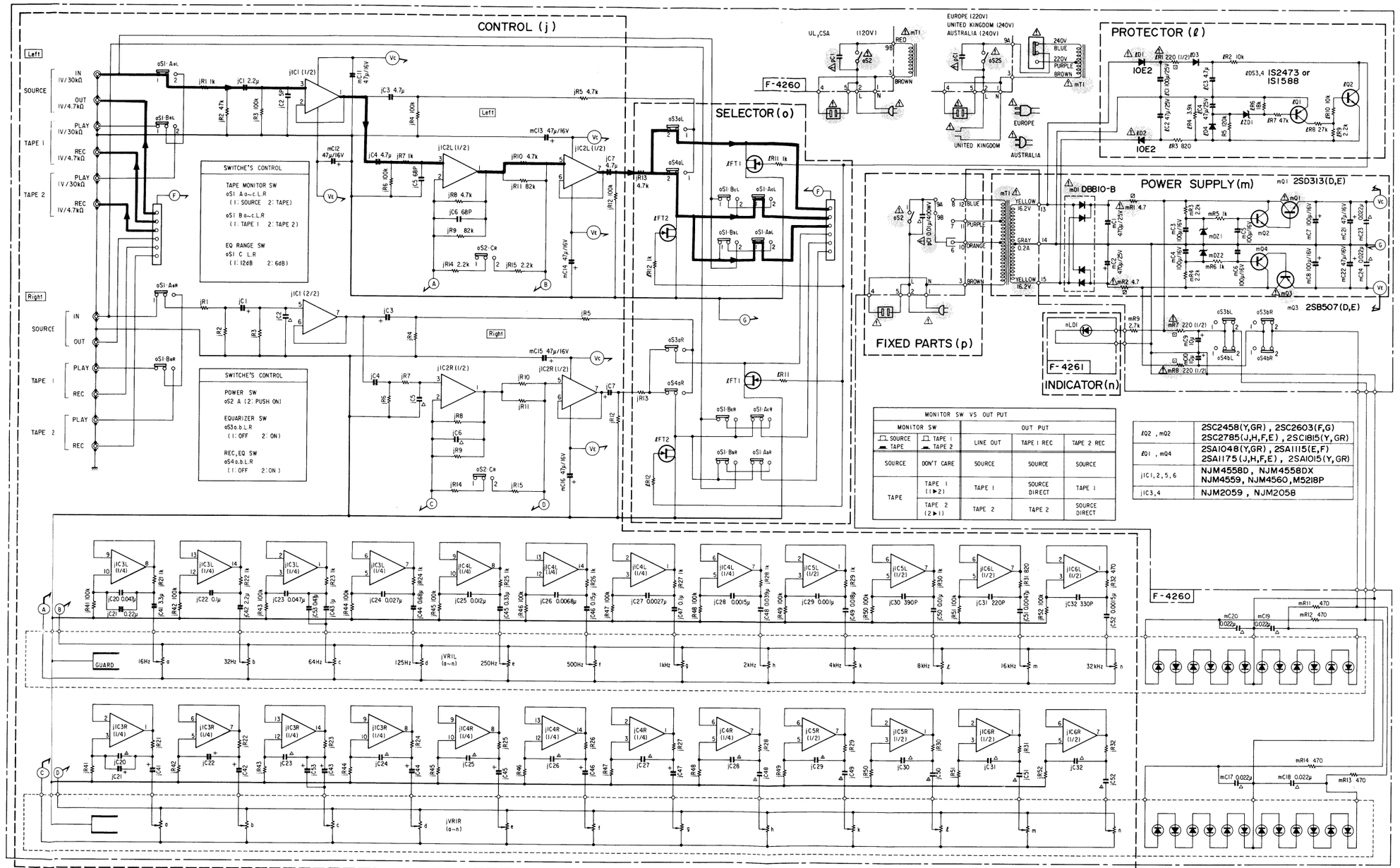
Parts No.	Stock No.	Description
•L.E.D		
nLD1	46176900	TLS-123 (Red)

•Abbreviations

C.R.	: Carbon Resistor	E.B.	: Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
Ce.R.	: Cement Resistor	Ta.C.	: Tantalum Capacitor
M.R.	: Metal Film Resistor	F.C.	: Film Capacitor
F.R.	: Fusing Resistor	M.P.	: Metalized Paper Capacitor
N.I.R.	: Non-Inflammable Resistor	P.C.	: Polystyrene Capacitor
A.R.	: Array Resistor	G.C.	: Gimmic Capacitor
C.C.	: Ceramic Capacitor	A.C.	: Array Capacitor
C.T.	: Ceramic Capacitor, Temperature Compensation	V.R.	: Variable Resistor
E.C.	: Electrolytic Capacitor	S.V.R.	: Semi Variable Resistor
E.L.	: Low Leak Electrolytic Capacitor	SW.	: Switch

3. SCHEMATIC DIAGRAM

*Design and specifications subject to change without notice for improvement.
*La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
*Anderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



MONITOR SW VS OUT PUT				
MONITOR SW		OUT PUT		
SOURCE / TAPE	TAPE 1 / TAPE 2	LINE OUT	TAPE 1 REC	TAPE 2 REC
SOURCE	DON'T CARE	SOURCE	SOURCE	SOURCE
TAPE	TAPE 1 (1▶2)	TAPE 1	SOURCE DIRECT	TAPE 1
	TAPE 2 (2▶1)	TAPE 2	TAPE 2	SOURCE DIRECT

iQ2 , mQ2	2SC2458(Y,GR) , 2SC2603(F,G) 2SC2785(J,H,F,E) , 2SC1815(Y,GR)
iQ1 , mQ4	2SA1048(Y,GR) , 2SA1115(E,F) 2SA1175(J,H,F,E) , 2SA1015(Y,GR)
iIC1,2,5,6	NJM4558D , NJM4558DX NJM4559 , NJM4560 , M5218P
iIC3,4	NJM2059 , NJM2058

2SA1015 2SK246
2SA1048
2SC1815
2SC2458 2SK117 2SK163
2SB507V11AL
2SD313AL
M5218P(RIAA)
NJM4558D-X
NJM4559D-D
NJM2058
DBB10-B
1S2473 05Z6.2-Y
10E-2 05Z15-Z
05Z15E-B

SYMBOL OF FUNCTION
(j) CONTROL
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR

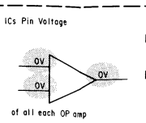
RESISTORS
Are in ohms, 1/4 W, ± 5% Tolerance
Unless otherwise noted. k : kΩ

CAPACITORS
Are in F, otherwise noted. μ : μF
P : pF

SYMBOL
△ Ceramic Capacitor (50WV Unless otherwise noted)
▲ Barrier Layer Capacitor (25 WV)
▣ Non-Inflammable Resistor
▨ Fusing Resistor

Electrolytic Capacitor
Are in F. μ : μF
0.1 ~ 0.47μF 100WV
1.0 ~ 10μF 50WV
Unless otherwise noted

ICs Pin Voltage



of all each OP amp

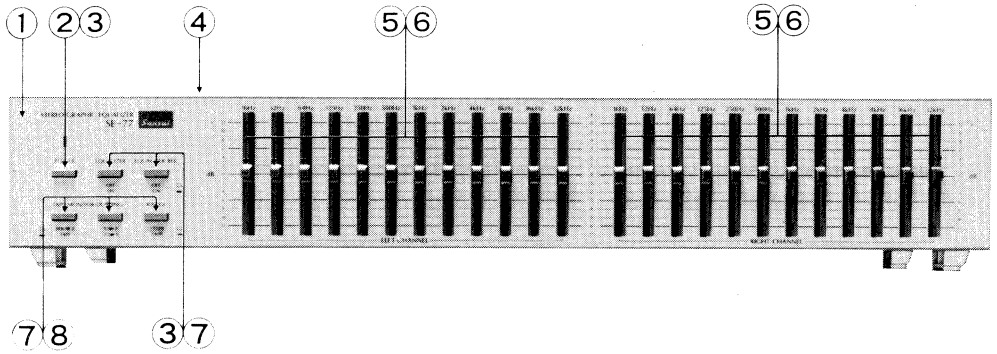
NJM4558, M5218P
Vcc +15V Pin 8
Vss −15V Pin 4
NJM2058
Vcc +15V Pin 4
Vss −15V Pin 11

⚠ is Safety part. Use only replacement parts recomended by the manufacturer.

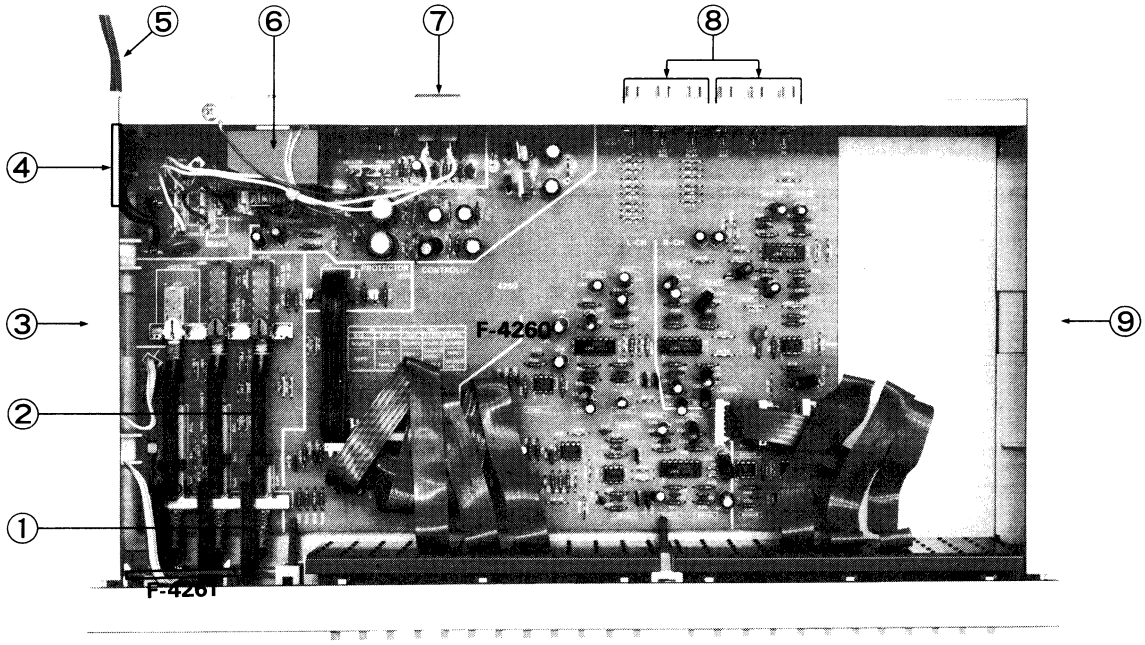
Signal Line (SOURCE•EQ ON•REC EQ ON)

4. OTHER PARTS

4-1. Front View



4-2. Top View



Parts List <Front View>

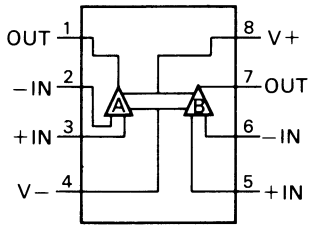
Parts No.	Stock No.	Description
1	47312100	Front Panel Ass'y <Silver Model>
	47312200	Front Panel Ass'y <Black Model>
2	47255400	Push Knob, POWER <Silver Model>
	47266400	Push Knob, POWER <Black Model>
3	46667800	Push SW., POWER•EQUALIZER• EQUALIZER REC
4	47256100	Bonnet <Silver Model>
	47256200	Bonnet <Black Model>
5	47258500	Slide Knob, EQUALIZER <Silver Model>
	47252400	Slide Knob, EQUALIZER <Black Model>
6	46643900	250kΩ(B)×12 Slide V.R. Ass'y (with L.E.D), EQUALIZER
7	47209000	Push Knob, EQUALIZER• EQUALIZER REC•TAPE MONITOR• RANGE <Silver Model>
	47255500	Push Knob, EQUALIZER• EQUALIZER REC•TAPE MONITOR• RANGE <Black Model>
8	46667600	Push SW., TAPE MONITOR•RANGE

Parts List <Top View>

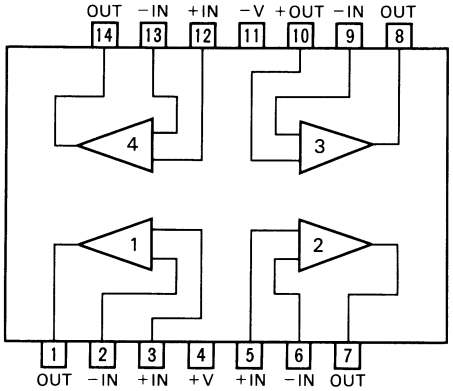
Parts No.	Stock No.	Description
1	47255600	Joint Shaft (Short)
2	47255700	Joint Shaft (Long)
3	47315500	Side Panel (Left) <Silver Model>
	47315600	Side Panel (Left) <Black Model>
4	47157300	Power Supply Cord Cover
5	38004700	Power Supply Cord
6	15013401	Power Transfomer
7	46364900	AC Outlet
8	46363900	6P Terminal Board, SOURCE•TAPE-1•TAPE-2
9	47314700	Side Panel (Right) <Silver Model>
	47314800	Side Panel (Right) <Black Model>

5. INTERIOR BLOCK DIAGRAM OF IC

•NJM4558DX (OP AMP. IC)
NJM4559D-D (OP AMP. IC)
M5218P (OP AMP. IC)
M5218P <RIAA> (OP AMP. IC)



•NJM2058 (OP AMP. IC)

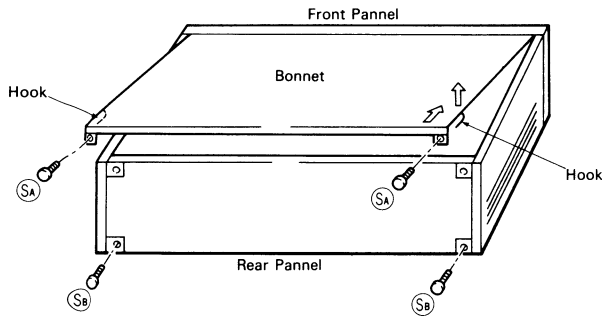


6. MAIN PARTS REPLACEMENT

A. Bonnet (See Fig. 6-1)

1) Remove two screws Ⓢ$_A$.
2) Push the rear side of the bonnet to remove the hooks and then remove bonnet.

Fig. 6-1



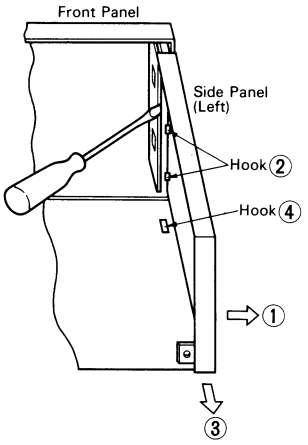
B. Bottom Plate

1) Remove two screws Ⓢ$_B$ (Fig. 6-1).
2) Push the rear side of the bottom plate to remove the hooks and then remove bottom plate.

C. Side Panel L (See Fig. 6-2 & Top View on Page 4)

1) Remove bonnet and bottom plate.
2) Shift the position of the side panel L 1.5 cm in to the arrow direction ①.
3) Remove the hook ④ of the side panel from printed circuit board (F-4260).
4) Remove power supply cord cover from the side panel L.
5) Remove the hooks ② of the side panel from front panel and then pull it to the arrow direction ③ to remove the side panel L.

Fig. 6-2

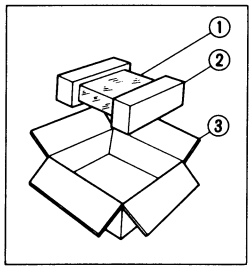


D. Side Panel R (See Fig. 6-2)

1) Remove bonnet and bottom plate.
2) Shift the position of the side panel R 1.5 cm in to the arrow direction ①.
3) Remove the hook ② of the side panel from front panel and then pull it to the arrow direction ③ to remove the side panel R.

7. PACKING LIST

Parts No.	Stock No.	Description
1	07599500	Vinyl Cover
2	07827210	Styrofoam Packing
3	47258700	Carton Case <Silver Model>
	47258600	Carton Case <Black Model>



8. ACCESSORY LIST

Stock No.	Description
38103300	PJP Cord
46606700	Operating Instruction